

Product Carbon Footprint Verification Opinion

**The Inventory of Product Carbon Footprint of
Network interface controller**

which is calculated by

Accton Technology Zhunan Factory

1F, 4F, 5F, No. 1, Keyi St., Zhunan Township,
Miaoli County 35059, Taiwan, R.O.C.

Based on life cycle assessment verified in accordance
with ISO 14064-3:2019 as meeting the requirements of

ISO 14067:2018

Basis of Assessment

Cradle-to-Grave

Authorized by



Stephen Pao

Business Assurance Director

Version 1

Issue Date: 17 September 2024

Valid Date: 16 September 2026

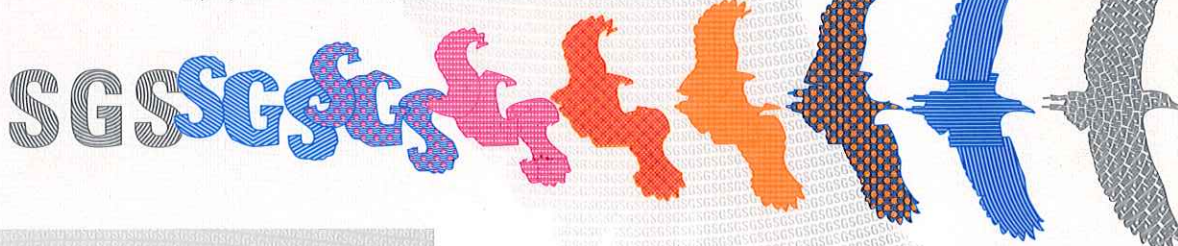
TGP57-15-16 2404

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Opinion TW24/00587CFP, continued

Product Name	Network interface controller					
Functional Unit	per unit					
Life cycle GHG emissions						
Functional Unit emissions (Unit: kilograms of CO ₂ e)						
Life Cycle Stage	Material	Manufacture	Distribution	Use	Disposal	Total
NA0P5NSN1-0621-APL	77.347	2.442	20.261	8,544.030	0.724	8,644.80

Opinion TW24/00587CFP, continued

SGS has been commissioned by Accton Technology Corporation (hereinafter referred to as "Accton Technology"), No. 1, Yanxin 3rd Rd, East District, Hsinchu City, 30077, Taiwan, R.O.C. to conduct the life cycle Greenhouse Gas (hereinafter referred to as "GHG") emissions verification of Network interface controller provided by Accton Technology Corporation Zhunan Factory (hereinafter referred to as "Accton Technology Zhunan Factory"), 1F, 4F, 5F, No. 1, Keyi St., Zhunan Township, Miaoli County 35059, Taiwan, R.O.C. in accordance with ISO 14064-3:2019 against the requirements of

ISO 14067:2018

Roles and responsibilities

- The management of Accton Technology Zhunan Factory is responsible for the organization's GHG information system, the development and maintenance of records and reporting procedures in accordance with that system, including the calculation and determination of the life cycle GHG emissions for product information and the reported life cycle GHG emissions of the product.
- Contract Date: The verification was based on the verification scope, objectives and criteria as agreed between Accton Technology and SGS on 26 March 2024.
- Verification Standard: ISO 14067:2018
Greenhouse gases- Carbon footprint of products- Requirements and guidelines for quantification
- Verification Period: 29 June 2024 to 16 July 2024.

Scope

- GHG information for the following production period was verified : 01 January 2023 to 31 December 2023.
- Title or description of activities : Product carbon footprint verification of the Cradle-to-Grave life cycle GHG emissions manufactured by Accton Technology Zhunan Factory:
 - Network interface controller NA0P5NSN1-0621-APL
- Manufacturing location :
 - 1F, 4F, 5F, No. 1, Keyi St., Zhunan Township, Miaoli County 35059, Taiwan, R.O.C.
- Product Category Rule : Nil.
- Functional unit : per unit

Opinion TW24/00587CFP, continued

- System boundary : Covers a Cradle-to-Grave assessment of the full life cycle emissions; the system boundary was clearly defined in accordance with ISO 14067:2018. All GHG's enlisted on ISO 14067:2018.
- Data resources : The primary data collection is from manufacturing and operational control phases. The secondary data collection is from Carbon Footprint Information Platform, Ecoinvent 3.
- Life cycle assessment tool and index :
 - Life cycle emissions are calculated by Excel and SimaPro 9.5.0.1.
 - IPCC 2021 AR6 GWP values are applied in this inventory.
- Level of assurance: In accordance with verification criteria and the execution of verification procedures based on bilateral agreements, the process aligns with the materiality requirements and the reasonable assurance level recognized by authorities.
- Materiality : 5%.

Objective

The purpose of this verification exercise is, by review of objective evidence, to independently review:

- Whether the life cycle GHG emissions of the product are as declared by the organization's GHG assertion.
- The data reported is accurate, complete, consistent, transparent and free of material error or omission.

Conclusion

- SGS's approach is risk-based, drawing on an understanding of the risks associated with reporting the life cycle GHG emissions of product information and the controls in place to mitigate these risks. Our examination included assessment and a test of evidence relevant to the amounts and disclosures in relation to the reported life cycle GHG emissions of the product. We planned and performed our work to obtain the information, explanations and evidence that the life cycle GHG emissions are free from material misstatement.
- Verification Opinion: the opinion of SGS is modified in accordance with the following described circumstances.
 - The auditor has sufficient and appropriate evidence to support the material emissions, removals, or storage.
 - The auditor applies appropriate criteria for the material emissions, removals, or storage.

Opinion TW24/00587CFP, continued

- When the auditor intends to rely on relevant controls, the effectiveness of those controls has been assessed.
- The auditor, applying the ISO 14067:2018 standard, presents the following findings. After adjustments and corrections, no material errors were identified.
 - The product carbon footprint is calculated based on the production output of the target product.
 - The activity data, coefficient references, GWP value references, and calculation processes for some emission sources were incorrect and have been corrected.
- Retention Limitation: NA

Confidentiality

The reports and attachments may contain relevantly confidential information of the clients. In addition to being submitted as governmental application or certification documents, the reports and attachments are not allowed to be edited, duplicated, or published without the clients' agreement in written form.

Avoidance of Conflict of Interest

The reports and attachments are completely complied with the standards and procedures that related-authorities established. The reports and attachments of auditing process are conduct with fairness and honesty. If not, the auditing institution not only has to bear the relevant compensation duties, but also to receive legal charge and punishment.

Opinion TW24/00587CFP, continued

Verifier Group

Above opinions coincide with auditing process with fairness and impartiality, and aim at the emission of clients.

Lead Verifier:

Kevin Hsieh

Verifier:

Finn Han

Belinda Shih

Victor Tseng

This opinion shall be interpreted with the GHG assertion of Accton Technology Zhunan Factory as a whole. This result shall be valid for a maximum period of two years, after which the GHG emission shall be re-assessed.

Note: This Opinion is issued, on behalf of Client, by SGS Taiwan Ltd. ("SGS") under its General Conditions for Green Gas Verification Services available at http://www.sgs.com/terms_and_conditions.htm. The findings recorded hereon are based upon an audit performed by SGS. A full copy of this Opinion, the findings and the supporting Carbon Footprint Assertion may be consulted at Accton Technology Corporation Zhunan Factory, 1F, 4F, 5F, No. 1, Keyi St., Zhunan Township, Miaoli County 35059, Taiwan, R.O.C. This Opinion does not relieve Client from compliance with any bylaws, federal, national or regional acts and regulations or with any guidelines issued pursuant to such regulations. Stipulations to the contrary are not binding on SGS and SGS shall have no responsibility vis-a-vis parties other than its Client.

碳足跡查證意見書

查證標的產品
網路介面控制器

以上產品碳足跡計算之提供者為
智邦科技股份有限公司竹南廠

苗栗縣竹南鎮公義里科義街 1 號 1、4、5 樓

本公司確認以生命週期評估數據為基礎
依據 ISO 14064-3:2019 完成查證並符合下列標準要求

ISO 14067:2018

產品的生命週期評估範疇
企業對消費者

簽署人



鮑柏宇
管理與保證事業群副總裁

版次:1

意見書發證日期：2024年09月17日

意見書有效日期：2026年09月16日

TGP57-15-16 2404
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意見書編號 TW24/00587CFP, 接續

產品名稱	網路介面控制器					
功能單位	每台網路介面控制器					
生命週期溫室氣體排放量						
查證標的產品功能單位排放量 (單位: 公斤二氧化碳當量)						
生命週期階段	原料	製造	配銷	使用	廢棄處理	總和
NA0P5NSN1-0621-APL	77.347	2.442	20.261	8,544.030	0.724	8,644.80

台灣檢驗科技股份有限公司(以下簡稱SGS),經與智邦科技股份有限公司(以下簡稱智邦科技),新竹市科學工業園區研新三路1號,達成雙邊協議,針對智邦科技股份有限公司竹南廠(以下簡稱智邦科技竹南廠),苗栗縣竹南鎮公義里科義街1號1、4、5樓,依據ISO 14064-3:2019之要求執行產品生命週期溫室氣體排放量之查證,確認符合以下標準要求

ISO 14067:2018

查證意見內容如下:

角色與責任

- 智邦科技竹南廠負責管理產品生命週期溫室氣體排放量盤查系統之記錄收集、維護和盤查報告的揭露,包括產品生命週期溫室氣體排放量資訊、排放量計算和判斷的報告。
- 簽約時間:SGS 秉持第三方查驗單位之準則,依據 2024 年 03 月 26 日簽訂雙邊協議
- 查證準則:ISO 14067:2018 溫室氣體 - 產品碳足跡 - 量化要求和指引
- 查證區間:2024 年 06 月 29 日至 2024 年 07 月 16 日

查證範圍

- 產品生命週期溫室氣體排放量資訊涵蓋週期:2023 年 01 月 01 日至 2023 年 12 月 31 日
- 查證之產品或服務活動:查證智邦科技竹南廠之產品如下:
 - 網路介面控制器 NA0P5NSN1-0621-APL
- 產品製造地點:
 - 苗栗縣竹南鎮公義里科義街 1 號 1、4、5 樓
- 產品類別規則:NA
- 功能單位:每台
- 系統邊界:涵蓋了從企業對消費者的生命週期的排放評估作業,系統邊界明確界定按照 ISO 14067:2018 之規範。排放之溫室氣體以 ISO 14067:2018 所述項目為基礎。
- 生命週期使用評估軟體:SimaPro 9.5.0.1
- 二級數據之資料庫來源:產品碳足跡資訊網、Ecoinvent 3.
- 生命週期評估工具和指標:
 - 使用 EXCEL 進行生命週期排放量的計算
 - 應用 IPCC 2021 年第六次評估報告之全球暖化潛勢數值進行計算
- 保證等級:依據查驗準則及雙邊協議執行查驗程序,未違反實質性差異門檻,符合主管機關認可之合理保證等級。
- 實質性差異門檻判斷準則:5%

查證目標

SGS獨立客觀的取得支持產品碳足跡溫室氣體主張揭露資訊的佐證，確保報告資訊符合準確性、完整性、一致性及透明度之準則。

結論

- SGS 採用風險評估方法為基礎，確保並控管產品生命週期溫室氣體排放資訊揭露風險；規劃及執行查證流程，包含行前評估、取樣計畫、證據之蒐集，取得查證意見需要之資訊、說明及相關佐證，確保溫室氣體聲明中的現場溫室氣體排放量無實質的錯誤聲明。
- 查證意見：SGS 根據下述狀況，提出修正後無保留意見之查驗意見。
 - 查證者有充分且適當的證據支持實質的排放量、移除量或儲存。
 - 查證者針對實質的排放量、移除量或儲存採取適當的準則。
 - 當查證者擬依賴相關管制時，管制之有效性已經過評估。
 - 查證者採用 ISO 14067:2018 準則，經查驗有以下發現事項，然經調整修正後，無產生實質性錯誤。
 - 產品碳足跡以標的產品產量進行碳足跡計算。
 - 部分排放源之活動數據、係數引用、GWP 值引用及計算過程有誤，已完成修正。
- 保留限制：NA

保密性聲明

此意見及附件可能包含屬於智邦科技竹南廠之機密資訊，未經智邦科技竹南廠書面同意，其他個人、團體或公司禁止自行複製或發行。

利益衝突迴避聲明

此意見及附件內容完全依照主管機關之標準方法與程序等相關規定，秉持公正、誠實進行查證作業，絕無虛偽不實。本公司與受查證單位並無財務投資之關係，且符合主管機關對利益衝突迴避之要求。

意見書編號 TW24/00587CFP, 接續

查證團隊

上述意見係查證團隊依據公正之查驗過程，針對智邦科技竹南廠之碳足跡主張所提出之意見。

主導查證員：

謝禎楷

查證員：

郭意如

史孟燕

曾偉編

本查證意見書之有效期間為兩年，智邦科技竹南廠應依標準條文之規範於適當時機重新評估產品生命週期溫室氣體排放量。

備註：本查證意見遵照SGS溫室氣體/碳足跡查證服務條款要求http://www.sgs.com/terms_and_conditions.htm，意見書內容由台灣檢驗科技股份有限公司依據碳足跡主張之查證結果進行編製，業經客戶同意後發行。本意見書非用以解除客戶遵守組織章程、全國或者地方法令，以及任何被發佈國際指南章程之責任；客戶與SGS彼此為獨立之個體，客戶非受SGS約束，在此SGS除客戶之外毋須代表其面對其他組織團體。